

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

1. (Currently Amended) A mirror structure comprising:
a self-deforming mirror mounted on a passive flexible support structure the support structure comprising, one or more passive flexible support elements arranged to provide a supporting surface on which the self-deforming mirror is mounted, wherein the support structure is arranged to enable a deformation response in the self-deforming mirror mounted thereon.
2. (Currently Amended) The mirror structure as claimed in claim 1, wherein the plurality of ~~discrete~~ passive flexible support elements are spatially arranged to support the self-deforming mirror from below, with each of the support elements having an end shaped for providing support to the self-deforming mirror and a flexible portion that connects the supporting end of the support element to a body portion of the support structure.
3. (Previously Presented) The mirror structure as claimed in claim 2, wherein at least one of the support elements is generally L-shaped such that one leg of the L-shape provides the flexible portion and the other leg of the L-shape provides the supporting end of the support element.

4. (Cancelled)

5. (Currently Amended) The mirror structure as claimed in claim 2, wherein each of the support elements is positioned so as to be in supportive contact with a different electrode of the self-deforming mirror ~~when~~ mounted thereon.

6. (Previously Presented) The mirror structure as claimed in claim 2, wherein the support elements are formed of compliant epoxy/rubber material.

7. (Previously Presented) The mirror structure as claimed in claim 2, wherein the supporting end of each support element is formed of compliant epoxy/rubber material and the remainder portion of each support element is formed of metal material.

8. (Previously Presented) A deformable mirror holder comprising a body with a receiving portion for receiving a deformable mirror wherein the receiving portion is defined by a passive flexible support structure such that, in use, the support structure provides a supporting surface to the mirror,

wherein the support structure comprises a plurality of discrete flexible support elements spatially arranged to support the mirror substrate from below, with each of the support elements having an end shaped to provide support to the mirror substrate and a flexible portion that connects the element's end to the holder's body, and

wherein the support elements are formed of a conducting compliant foam such that they permit electrical connection to a number of mirror electrodes.

9. (Currently Amended) The mirror structure as claimed in claim 2, wherein the support elements are formed as ~~integrally~~ integral parts of the body portion of the support structure.

10. (Previously Presented) The mirror structure as claimed in claim 6, wherein the compliance of compliant material selected to form at least a portion of each of the support elements varies according to an established position of the support element in the support structure.

11. (Previously Presented) The mirror structure as claimed in claim 10, wherein the compliance of the selected compliant material varies according to the distance of the respective support element from the edge of a supported mirror substrate.

12. (Currently Amended) The mirror structure as claimed in claim 6,[[,]] wherein the compliance of each of the support elements ~~is adjusted~~ varies according to the position of the support element in the support structure.

13. (Currently Amended) The mirror structure as claimed in claim 12, wherein the compliance of each of the support elements varies according to ~~varying~~ the length of the support element.

14. (Previously Presented) The mirror structure as claimed in claim 12, wherein the compliance of each of the support elements varies according to the cross-sectional area of the support element.

15. (Currently Amended) The mirror structure as claimed in claim 12, wherein the compliance of each of the support elements varies according to ~~varying~~ the compliance of the compliant material used to form the support element.

16. (Previously Presented) The mirror structure as claimed in claim 1, wherein the support structure comprises a generally solid unitary structure with compliant characteristics, which unitary structure is arranged to extend across the entire width of the self-deforming mirror surface for support thereof from below.

17. (Previously Presented) The mirror structure as claimed in claim 16, wherein the unitary structure is formed of epoxy/rubber material.

18. (Previously Presented) The mirror structure as claimed in claim 16, wherein the unitary structure includes a number of hole sections for permitting access to a number of electrodes of the self-deforming mirror when mounted thereon.

19. (Previously Presented) The mirror structure as claimed in claim 16, wherein the unitary structure includes a number of metallic interconnections

permitting connection to a number of electrodes of the self-deforming mirror when mounted thereon, which metallic interconnections are arranged to respond to the deformation of the unitary structure in use.

20. (Previously Presented) The mirror structure as claimed in claim 16, wherein the compliance of the unitary structure varies according to the distance from the edge of the unitary structure.

21. (Previously Presented) The mirror structure as claimed in claim 20, wherein the unitary structure comprises a plurality of discrete annuli each composed of a compliant material having a different compliance.

22. (Previously Presented) The mirror structure as claimed in claim 20, wherein the thickness of the unitary structure varies according to distance from the edge of the unitary structure.

23. (Previously Presented) The mirror structure as claimed in claim 16, wherein the unitary structure is composed of a compliant material having substantially uniform compliance and a thickness of the unitary structure varies according to distance from the edge of the unitary structure.

24. (Canceled)

25. (Previously Presented) The mirror structure as in claim 1, wherein the self deforming mirror comprises a reflective surface provided on a substrate and a layer of deformable material attached to the substrate that is operable to deform the mirror.

26. (Previously Presented) The mirror structure as claimed in claim 25, comprising a cooling system.

27. (Previously Presented) The mirror structure as claimed in claim 26, wherein said cooling system comprises a number of interconnecting conduits which are joined to form a continuous through-passage, enabling coolant to be admitted and circulated therethrough.

28. (Previously Presented) The mirror structure as claimed in claim 24, further comprising a tip-tilt stage.

29. (Canceled)

30. (Canceled)

31. (Currently Amended) ~~[[A]]~~ The mirror structure as claimed in claim 1, wherein ~~[[a]]~~ the required deformation response for the self-deforming mirror includes a ~~required~~ resonant frequency for the self-deforming mirror ~~when~~ mounted on the support structure.

32. (Currently Amended) The mirror structure as in claim 1, wherein ~~[[a]]~~ the ~~required~~ deformation response for the self-deforming mirror includes a required stroke characteristics for the self-deforming mirror ~~when~~ mounted on the support structure.

33. (Previously Presented) The mirror structure as in claim 1, wherein the self-deforming mirror is a bimorph self-deforming mirror having at least one layer of deformable material.

34. (New) The mirror structure as in claim 2, wherein at least some of the support elements are disposed in equi-spaced relationships in a circular arrangement, each positioned so as to be in contact with one or more mirror electrodes when in use.